Abstract

[0127] A method and apparatus for dynamically balancing the loading of data storage facilities containing video data files to facilitate the transfer of the video data files or portions of video data files from a file server system to client computing system. The method for balancing a loading of a storage device attached to multiple computing begins by acquiring a listing of locations and loading of all segments of a requested data object including all copies of the segments of the requested data object. Those storage devices containing copies of each segment of the data object having a least loading are selected. If the loading of the storage devices is greater than the maximum loading for the storage devices, the segment is divided into sub-segments and stored to storage devices with minimum loading. The presence of all segments of the requested data object is determined. If there are missing segments of the requested data object, each of those missing segments is assigned a file identification and file location, such that those missing segments are assigned to data storage devices having the least loading. The missing segments are retrieved from a back-up storage device. The segments of the requested data object are then transferred to a requesting computer system.